

## Description

A unique three terminal miniature magnetic receiver utilizing Tibbetts' innovative patented construction for use in hearing instruments and communication devices requiring reliability, high sensitivity, and small size.

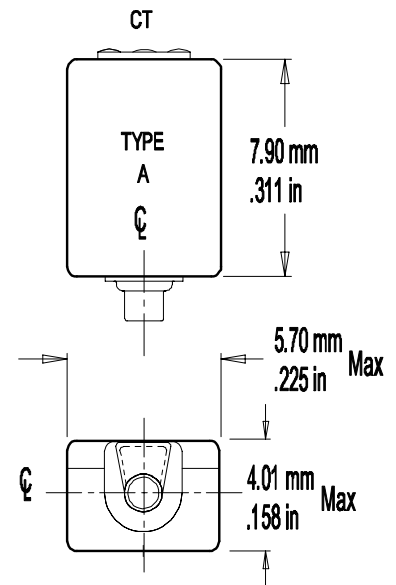
- Exceptional magnetic shielding
- Extended Frequency Response Optimized
- Center Tapped for Push/Pull Output Amplifiers for HFA on Specified Acoustic Loads
- Welded construction
- Unequaled shock resistance
- Low acoustic distortion
- High acoustic pressure capability

## Model Numbers

Model numbers designate electrical and physical characteristics.  
 Example model number: 87-13A-xxx.

- "A" refers to the standard port tube location pictured to the right. Other configurations may be specially ordered. Please contact Tibbetts Customer Service for details.
- "-xxx" refers to electrical characteristics. Please refer to *83/85/87 Electrical Data Sheet* for available electrical specifiers.

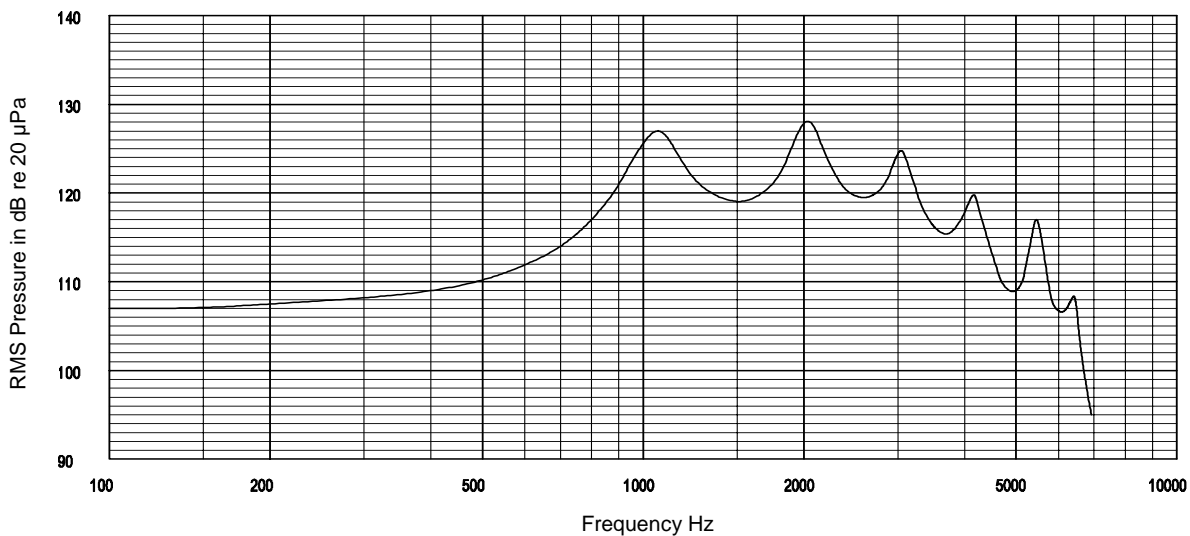
## Physical Dimensions



Port tube: 1.40mm (.055 in.) O.D. projecting 1.57mm (.062 in.)

Unit Volume: .179 cc (.011 cu. in.)  
 Unit Weight: 700 mg (.025 oz.)

## Acoustic Response



TEST CONDITIONS: Typical response measured under the following test conditions: constant current sources  $(1000/Z_R)^{1/2}$  ma rams with 8mm of 1mm plus 28mm of 1.5mm plus 25mm of 2mm plus 18mm of 3mm tubing into a 2cc coupler (ANSI S3.7 – 1973 Fig. 12).

## 83/85/87 Series Receiver

### General Specifications

Resistance Tolerance	±15%
Impedance Tolerance	± 20%
THD*, Maximum	10%
Sensitivity*, SPL @200 Hz	109 ± 3dB (Series 83 & 85) 107.5 ± 3dB (Series 87)

### Model Numbers

Model numbers designate electrical and physical characteristics. Example model number: 87-12A-xxx.

- “A” refers to the standard port tube location pictured to the right. Other configurations may be specially ordered. Please contact Tibbetts Customer Service for details.
- “-xxx” refers to electrical characteristics. Please see below for available Electrical Characteristics and Electrical Specifiers. Other characteristics custom designed on special order.

### Commonly Specified Electrical Characteristics

#### Series 83/85/87-12 2 Terminal Models

Electrical Specifier	Z Rated	Z 1kHz	DC Res 20°C	Bias MA
-309	203	257	42	4.50
-017	250	300	58	2.00
-117	250	300	58	0.00
-016	420	500	92	1.55
-001	525	600	105	1.50
-005	1100	1300	245	0.90
-003	1700	2050	520	0.78
-007	2100	2500	435	0.60

#### Series 83/85/87-13 3 Terminal Models

Electrical Specifier	Z Rated	Z 1kHz	DC Res 20°C	Bias MA
-024	48	56	11.3	0
-022	264	300	58	0
-014	275	320	70	0
-021	400	484	73	0
-011	410	500	92	0
-001	525	600	105	0
-006	875	1000	215	0
-020	950	1100	196	0
-023	1177	1348	250	0

\* TEST CONDITIONS: Typical response measured under the following test conditions: constant current sources  $(1000/Z_R)^{1/2}$  ma rms with 8mm of 1mm plus 28mm of 1.5mm plus 25mm of 2mm plus 18mm of 3mm tubing into a 2cc coupler (ANSI S3.7 – 1973 Fig. 12).

Z rated is specified and measured as the geometric mean of the impedance at 300 Hz and the maximum impedance below 5000 Hz